

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L7	7	(migrat\$4 and legacy and (business adj application\$2) and (graph same method\$2)) and "719"/313-318.ccls. <i>Rev all</i>	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 11:01
L6	0	(graph same object\$2 same predecessor\$2) and "719"/313-318.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 11:01
L4	11	(migrat\$4 and legacy and (business adj application\$2) and (graph same method\$2)) and "719"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 11:01
L2	2	(graph same object\$2 same predecessor\$2) and "719"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 11:01
L5	18	(business adj application and (gui or panel\$2 or window\$2) and transaction) and "719"/313-316.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 10:59
L1	50	(business adj application and (gui or panel\$2 or window\$2) and transaction) and "719"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 10:58
S11 1	15	migrat\$4 and legacy and (business adj application\$2) and (graph same method\$2)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 10:52
L3	52	(migrat\$4 and legacy and (business adj application\$2) and (graph same method\$2))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 10:52
S10 2	38	graph same object\$2 same predecessor\$2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 10:50

S16	280	business adj application and (gui or panel\$2 or window\$2) and transaction <i>Scan</i>	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/05/02 10:48
S10 9	244	migrat\$4 and legacy and (business adj application\$2) <i>Scan</i>	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/04/29 11:17
S11 0	3	migrat\$4 and legacy and (transaction same graph) <i>Rev all</i>	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/04/29 11:14
S10 7	70	business near5 application and transaction adj method\$2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/04/29 11:12
S10 6	2	transaction adj method same business adj application	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/04/29 11:11
S10 5	155	panel near5 sequence same application <i>Scan all</i>	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/04/29 11:10
S10 4	8	panel\$driven <i>Rev all</i>	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/04/29 11:10
S10 3	5	schmidt and twisselmann	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/04/28 11:46

# STIC Search Report

## EIC 2100

Case Serial Number: 09/624,524

File 275:Gale Group Computer DB(TM) 1983-2006/Feb 27  
(c) 2006 The Gale Group  
File 621:Gale Group New Prod.Annou.(R) 1985-2006/Feb 27  
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File 636:Gale Group Newsletter DB(TM) 1987-2006/Feb 27  
(c) 2006 The Gale Group  
File 16:Gale Group PROMT(R) 1990-2006/Feb 28  
(c) 2006 The Gale Group  
File 160:Gale Group PROMT(R) 1972-1989  
(c) 1999 The Gale Group  
File 148:Gale Group Trade & Industry DB 1976-2006/Feb 27  
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(c) 2006 McGraw-Hill Co. Inc  
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(c) 2005 IDG Communications  
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(c) 2006 Reed Business Information Ltd.  
File 810:Business Wire 1986-1999/Feb 28  
(c) 1999 Business Wire  
File 813:PR Newswire 1987-1999/Apr 30  
(c) 1999 PR Newswire Association Inc

Set	Items	Description
S1	14070219	PROGRAM? ? OR SOFTWARE OR APPLICATION? ? OR APP OR APPS
S2	5056597	PANEL? ? OR PANE OR PANES OR WINDOW? ? OR SCREEN? ? OR BOX OR BOXES OR FRAME OR FRAMES
S3	244121	(SERIES OR SEQUENCE? ? OR SUCCESSIV? OR SUCCESSION OR SUCC- EEDING OR SUBSEQUENT?? OR TRANSITION? OR ORDER??? OR CONSECUT- IV? OR PROGRESSION OR CHAIN??? OR TRAIN? ? OR LINK??? OR CONN- ECT???) (5N)S2
S4	34123	(NEXT OR ENSUING OR FOLLOWING) (3W)S2
S5	115658	S2(7N)(GRAPH??? OR DIGRAPH?)
S6	98754	(INVOK??? OR INVOCATION OR CALL???) (5N)(METHOD? ? OR PROCE- DURE? ? OR FUNCTION? ?)
S7	608395	OBJECT? ? OR OO OR OOP OR OOPPL OR OOPLA OR OLE
S8	156739	S1(5N)(LEGACY OR OLD OR OLDER OR OUTDATED OR OUT(1W)DATE OR PREEXIST? OR PRE()EXIST?)
S9	2062611	S1(5N)(MODERN OR NEW OR UPDAT? OR CURRENT OR RECENT OR BAC- KWARD()COMPAT?)
S10	37494	S1(5N)(REUSE? ? OR REUSING OR REUSABLE OR REUSABILITY OR R- E() (USE OR USING OR USABLE OR USABILITY))
S11	2201	S3:S5(50N)S7(50N)S8:S10
S12	1505	S11 NOT PY=1996:2006
S13	88	S3:S5(50N)S7(50N)S6(50N)S8:S10
S14	66	RD (unique items)
S15	51	S14 NOT PY=1996:2006
S16	247	S3:S5(100N)S7(100N)S6(100N)S8:S10
S17	184	RD (unique items)
S18	82	S17 NOT (S15 OR PY=1996:2006)
S19	9692	S2(7N)(GRAPH? ? OR GRAPHED OR GRAPHING OR DIGRAPH?)
S20	54183	(S1 OR OBJECT? ? OR COMPONENT? ?) (5N)(REUSE? ? OR REUSING - OR REUSABLE OR REUSABILITY OR RE() (USE OR USING OR USABLE OR - USABILITY))
S21	208	(S3:S4 OR S19) (100N)S7(100N)S6(100N) (S8:S9 OR S20)
S22	155	RD (unique items)
S23	71	S22 NOT (S15 OR PY=1996:2006)
S24	22848	(SERIES OR SEQUENCE? ? OR SUCCESSIV? OR SUCCESSION OR SUCC- EEDING OR CONSECUTIV? OR PROGRESSION) (3W)S2

S25	121666	(TRANSITION? OR ORDER??? OR CHAIN??? OR TRAIN? ? OR LINK??? OR CONNECT???) (3N)S2
S26	122	S24:S25(50N)S8(50N)S7
S27	239	S24:S25(100N)S8(100N)S7
S28	142	RD (unique items)
S29	48	S28 NOT (PY=1996:2006 OR S15 OR S18)
S30	112	S8(50N)S7(50N)S6(50N)S2
S31	85	RD (unique items)
S32	34	S31 NOT (PY=1996:2006 OR S15 OR S18 OR S29)

15/9/6 (Item 6 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01779222 SUPPLIER NUMBER: 16941388  
**COBOL connects PowerBuilder, VB: Micro Focus' Bridgeware automatically  
generates scripts. (DeskTop Bridgeware, Server Enabling Kit)(Product  
Announcement)**

Leach, Norvin  
PC week, v12, n18, p10(1)  
May 8, 1995

DOCUMENT TYPE: Product Announcement ISSN: 0740-1604 LANGUAGE:  
ENGLISH RECORD TYPE: ABSTRACT

ABSTRACT: Micro Focus announces its Bridgeware tools, which generate external **function calls** in PowerBuilder or Visual Basic script. Automatically generating this code will facilitate giving desktop **applications** access to COBOL **applications** and **legacy** data. Bridgeware works by generating the **function calls** and sets the required variables. Developers only need to know what COBOL programs are available and what screen **objects** or **windows** these programs should **link** to. Desktop Bridgeware is priced at \$399 per programmer for PowerBuilder or Visual Basic. The firm also plans to introduce a Server Enabling Kit in Jun 1995 that will be priced at \$500 and will call for the Micro Focus Transaction System.

SPECIAL FEATURES: illustration; other  
COMPANY NAMES: Micro Focus--Product introduction  
DESCRIPTORS: Application Development Software; Software Product  
Introduction  
PRODUCT/INDUSTRY NAMES: 7372510 Computer Language Software ex Military  
SIC CODES: 7372 Prepackaged software  
TRADE NAMES: Desktop Bridgeware (Application development software)--  
Product introduction; Server Enabling Kit (Application development  
software)--Product introduction  
FILE SEGMENT: CD File 275

**15/3,K/1 (Item 1 from file: 275)**  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01801030 SUPPLIER NUMBER: 17162448 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**The right cut.(splitting applications)(Client/Server Deployment)**  
Scheier, Robert L.  
PC Week, v12, n25, p19(2)  
June 26, 1995  
ISSN: 0740-1604 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1347 LINE COUNT: 00109

... not only requires ever-more-powerful PCs over time, but it also makes it harder to switch **applications** and **reuse** code by locking much of the business logic on client PCs.  
The ideal answer? Split up applications...

...as Powersoft Corp.'s PowerBuilder and Microsoft Corp.'s Visual Basic, which require a client to run **windows** dynamic **link** libraries to access a single database using drivers specific to that database. Tools to help developers do...

...of "drag-and-drop" partitioning. Corporate developers must sift through a welter of technical approaches, including **object** request brokers, RPCs (remote **procedure calls**), transaction-processing monitors, and high-level languages, such as Dynasty Technology Inc.'s Dynasty Development Environment or...

...eye on the partitioning problem. The Redmond, Wash., giant is working with Texas Instruments Inc. to make **OLE** (**Object** Linking and Embedding) a "glue" that can paste together application components as needed. However, that technology won...

...most of the current partitioning approaches have in common is that they assume corporate developers will develop **applications** in discrete pieces be they services, **reusable** code components, or objects that can eventually be moved from platform to platform. Leading-edge corporate developers are...

**15/3,K/3 (Item 3 from file: 275)**  
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01797275 SUPPLIER NUMBER: 17016769 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Brave new world predicted for Borland Delphi. (Software Review)(Evaluation)**  
Liczbanski, Michael  
Data Based Advisor, v13, n4, p84(4)  
May, 1995  
DOCUMENT TYPE: Evaluation ISSN: 0740-5200 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 2569 LINE COUNT: 00214

... such as the windows message loop, and lets you include in-line assembly code. OPW sports full **object** orientation (polymorphism, inheritance, and encapsulation) and is "Delphi component-aware"--writing code needed to manipulate Delphi components...

...can handle runtime exceptions using C++ style exception handling, which greatly simplifies writing error-handling code. The **object** orientation of OPW lets developers create reusable **objects** and components that can be shared among many applications. Since individual **objects** are testable, many development and debugging headaches are alleviated.

Projects

Delphi organizes application files within projects. New...

...project configuration files, unit source code files, binary graphical form files, and resource files used by the **application**. **New** forms and other files are automatically added to the project file, but you can also add **objects** from other projects using the Project Manager. For larger projects, and in a team development environment, Delphi...

...integrated development environment. The debugger allows executing a single program statement at a time (trace), stepping over **function calls**, executing the program to a specific point, and pausing the program at any time. While in debug...

...bringing up the Evaluate/Modify dialog to directly check and modify variables and expressions. The Call Stack **window** allows viewing of the **sequence** of **function calls**, and viewing and editing the source code. Syntax checking, testing, and debugging can be done without building...

**15/3,K/4 (Item 4 from file: 275)**

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01794107 SUPPLIER NUMBER: 16978967 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Meandering through the maze of MFC message and command routing. (Microsoft Foundation Class)(Tutorial)**

DiLascia, Paul

Microsoft Systems Journal, v10, n7, p17(18)

July, 1995

DOCUMENT TYPE: Tutorial ISSN: 0889-9932

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 11504 LINE COUNT: 00938

... they do for modal dialogs--but no. There's TranslateMDISysAccel for MDI accelerators, like Ctrl-F6 for **Next window** and Shift-F5 for Cascade. Oh, and I almost forgot--if you want to do idle processing...

...apps by the score. Message pumps go the way of the passenger pigeon. But underneath all the **object** glitz, your wizard-generated **app** still trudges through the same **old** muck. You just don't see it, that's all. Buried inside a **function** called CWin-Amp::Run is the mother-of-all-message-pumps. MFC hides the voodoo, or at least...

**15/3,K/6 (Item 6 from file: 275)**

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01779222 SUPPLIER NUMBER: 16941388  
**COBOL connects PowerBuilder, VB: Micro Focus' Bridgeware automatically generates scripts. (DeskTop Bridgeware, Server Enabling Kit)(Product Announcement)**

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May 8, 1995

DOCUMENT TYPE: Product Announcement  
ENGLISH RECORD TYPE: ABSTRACT

ISSN: 0740-1604

LANGUAGE:

ABSTRACT: Micro Focus announces its Bridgeware tools, which generate external **function calls** in PowerBuilder or Visual Basic script. Automatically generating this code will facilitate giving desktop **applications** access to COBOL **applications** and **legacy** data. Bridgeware works by generating the **function calls** and sets the required variables. Developers only need to know what COBOL programs are available and what screen **objects** or **windows** these programs should **link** to. Desktop Bridgeware is priced at \$399 per programmer for PowerBuilder or Visual Basic. The firm also...



**15/3,K/7 (Item 7 from file: 275)**  
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01624408 SUPPLIER NUMBER: 14608749 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Objects' Layout eases program construction. (Objects Inc.'s Layout 3.02 graphical user interface development software) (Software Review) (Evaluation)**

Coffee, Peter  
PC Week, v10, n43, p120(1)  
Nov 1, 1993

DOCUMENT TYPE: Evaluation ISSN: 0740-1604 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1270 LINE COUNT: 00103

... were easily eliminated by choosing Standard Font rather than a custom font when laying out the screen. **Objects** ' technical support personnel did not recognize the symptoms that we described, and the problem could not be...

...Support for objectoriented approach

Layout's tools can be used to build either applications or black-box **objects** that are meant to be used as application modules.

To some extent, Layout follows the **object** -oriented hype route of wrapping an interface around a **procedure** and calling it an **object** . **Object** -oriented aficionados will note a lack of inheritance, specialization, polymorphism, and other **object** -oriented fundamentals.

On the other hand, Layout's application-building environment makes it very convenient to build and distribute **reusable** mix-and-match pieces of **programs** , and to package them in libraries that can be understood and used by someone other than their original author. This is the business case for **object** techniques, and Layout delivers this better than many other tools that are theoretically much more "pure."

Variety of delivery targets  
With its ability to deliver applications for DOS **graphics** , running under DOS, **windows** , or OS/2, Layout can be deployed on the majority of corporate desktops.

We encountered one small...

**15/3,K/12 (Item 12 from file: 275)**  
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01517923 SUPPLIER NUMBER: 12149894 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**VZ Programmer. (Software Review) (one of eight program development software packages in 'More Than Just a Pretty Face?') (Evaluation)**

Shaw, Richard Hale  
PC Magazine, v11, n11, p236(2)  
June 16, 1992

DOCUMENT TYPE: Evaluation ISSN: 0888-8507 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 874 LINE COUNT: 00069

... an edit box.

With VZ Programmer's GUI Construction Kit, you select from predefined classes for the **objects** in an interface. There's full support for graphical **objects** such as lines, circles, pie charts, and polygons, as well as all the standard windows controls except...

...can be run by the VZ Programmer environment or the runtime facility.

VZ Programmer stores applications and **objects** in a persistent **object** database, or folder, which is the base of the **object** hierarchy.

Each folder contains one or more groups, which in turn hold one or more pages, and each page contains **objects**. Persistency lets you save and restore **objects** to disk will all their attributes and relationships. Along with the ability to create your own classes, this lets you create **reusable objects** called **software** components, which can be added to any application, or which can be self-contained applications in their...

...lift much of the code from your existing C or C++ applications. There are over 20 predefined **object** classes for **windows**, and over 60 system, menu, and **graphics** functions; you can derive your own user-defined classes from them, or **call** any **function** in a windows DLL. A version for the OS/2 Presentation Manager is available.  
VZ Programmer's...

...2. Unfortunately, this version of C++ supports only single inheritance, so you can only derive a new **object** class from one parent class; and it is limited in other ways. For example, labels and Goto...

15/3,K/17 (Item 17 from file: 275)  
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01499684 SUPPLIER NUMBER: 11936421 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Integrated development with Actor. (Software Review) (The Whitewater Group's Actor applications development program) (Evaluation)**  
Burgess, Mark S.  
DBMS, v5, n2, p29(2)  
Feb, 1992  
DOCUMENT TYPE: Evaluation ISSN: 1041-5173 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1320 LINE COUNT: 00105

... prevent changes to the code from rippling through unrelated program functions that inherited functions from the same **object**. Put another way, protocols act like virtual base classes in C++, with the exception that they do...

...where characteristics of a particular part of the program aren't brought together until run time) permits **objects** to safely share functions through a protocol.

One example use of safe multiple inheritance is in handling printers. If you have two printers, one handled by printer **object** A and the other by printer **object** B, you may want them both to inherit the basic printer functionality (methods) from the printer protocol...

...to the windows API. You can look up any of the C functions used to create a **windows** application. Hypertext **links** let you move easily between references. This access also lets you further customize your application by linking C-code API **calls** directly into Actor **methods** of your own.

Combining access to the Microsoft Resource Compiler and the Whitewater Resource Toolkit, you can prepare and include icons, cursors, menus, and dialogs in your **application**.

Although you must learn a **new** language with Actor 4.0, the benefits come faster than with any other language. Few other products join the modem technologies of windows, **object**-oriented programming, and cross-datafile compatibility as well.

Actor 4.0

The Whitewater Group, 1800 Ridge Ave...

15/3,K/19 (Item 19 from file: 275)  
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01380487 SUPPLIER NUMBER: 09609419 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Extending off-the-shelf windows applications with macros and DLLs. (Dynamic Link Libraries) (tutorial)**  
Eisner, Bill  
Microsoft Systems Journal, v5, n6, p89(8)  
Nov, 1990  
DOCUMENT TYPE: tutorial ISSN: 0889-9932 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 3347 LINE COUNT: 00266

... in other source programs or libraries of compiled programs.  
Usually, a linker connects external calls from compiled **objects** to entry points in other compiled **objects** or library routines. In a traditional "static" environment, linking a compiled **object** to a library routine results in compiled code from the library being added to the execution module by the **linker**.

The Microsoft **windows Software Development Kit (SDK)** introduced a **new** form of linking that delays the resolution of some library linkages until run time. This dynamic technique allows these library execution routines to be shared, since the **object** code is not bound with individual software packages.

By inventing DLLs, windows developers created a new form of execution **object** that resembles a conventionally linked program (so closely that DLLs used to be identified with the EXE...

**15/3,K/20 (Item 20 from file: 275)**  
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01379745 SUPPLIER NUMBER: 09526561 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Level 5 Object mixes versatile programming tools. (Software Review)**  
**(Information Builders Inc. Level 5 Object 2.1 program development tool)**  
**(evaluation)**  
Coffee, Peter  
PC Week, v7, n42, p75(2)  
Oct 22, 1990  
DOCUMENT TYPE: evaluation ISSN: 0740-1604 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 526 LINE COUNT: 00041

... library of sample applications provides many ideas about how to harness this product's flexibility.

Level 5 **object** is a windows application through and through, resembling the windows Program Manager with its labeled icons representing ...

...access to the Display Editor, a drawing tool that lets the user build a layout of intelligent **objects** such as a "Valuebox" that shows the current value of a variable. This gets the **new application** off to a flying start.

The next block contains the Init Demons -- the rules and **procedures invoked** when the application starts.

The Rule/Demon/ **Method** Editor, **invoked** from this block, is a model of visual design. Its multipaned window offers point-and-shoot selection...

...rules (which can be used as templates for new rules) and another pane for editing.

Level 5 **object** applications do their work through the Agenda, a block of the tree that can retrieve existing data...

...of most development tools. For large applications, the Agenda becomes a deeply nested structure, but a zooming **graphic window** makes navigation easy.

Finally, a Conclusions Display presents the application's answers with the aid of the...

**15/3,K/21 (Item 21 from file: 275)**  
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01366807 SUPPLIER NUMBER: 08695440 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Extending the windows 3.0 interface with installable custom controls.**  
**(tutorial)**

Welch, Kevin P.

Microsoft Systems Journal, v5, n4, p29(23)

July, 1990

DOCUMENT TYPE: tutorial ISSN: 0889-9932

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 6288 LINE COUNT: 00568

... of the control library functions inside your application. For example, in certain situations you might want to **call** the control information or style **functions**. If you create an import library for your installable control (using the IMPLIB facility) and include it with the list of **object** libraries searched during the **linking** of your application, **windows** will automatically load the control library when resolving these external references. In the process of loading the library, the control initialization **function** will be **called**, and your control will be registered with the system.

The third approach is a manual one in...

...Control

Once you have made sure that your library will be loaded successfully, you can use the **new** control throughout your **application**, even as a child of an existing window. If you wish, you can create child windows based...

**15/3,K/22 (Item 22 from file: 275)**  
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01364355 SUPPLIER NUMBER: 08465626 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**21st century assembler. (object-oriented programming in assembly language)(technical) (tutorial)**

Toutonghi, Michael

Computer Language, v7, n6, p65(6)

June, 1990

DOCUMENT TYPE: tutorial ISSN: 0749-2839

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 3460 LINE COUNT: 00278

... instances of one type share the same method code for acting upon their data elements. Thus, an **object** is a variable that has structured data elements as well as methods designed specifically to act upon those data elements.

For example, an **object** definition of type Point may include X and Y coordinates as well as a method to move...

...original Move method code for acting upon that data. The Point type fits our description of an **object** because its definition includes both data elements X and Y and a method for moving an instance...

...Encapsulation is nothing new to most of us. When you create a module of functions for handling **screen** output and later **link** that module into a program, you have encapsulated the screen-function module. If you've structured the...

...without modifying the code that uses it. This ability to modify isolated

portions of code without introducing **new** bugs into a **program** is the major benefit of encapsulation.

Because **objects**, by definition, have methods that act upon their data elements, they lend themselves nicely to encapsulation. Ideally, all the data items of an **object** are completely unknown to all program code (except their associated methods). This setup allows the structure of an **object** type and its method code to be change or enhanced at any time without affecting other code using that **object** type.

Some would argue that, in practice, it is sometimes more efficient to read or even modify an **object**'s data directly rather than **invoke** an associated **method**. For this reason, the concept of public and private data elements has been created. A public data...

**15/3,K/24 (Item 24 from file: 275)**  
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01309205 SUPPLIER NUMBER: 07705012 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**New tools ease development of graphical interfaces. (OS/2: on the Threshold special report)**

Pallatto, John  
PC Week, v6, n38, pS25(1)  
Sept 25, 1989

ISSN: 0740-1604 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 659 LINE COUNT: 00055

... screen.

IBM teamed up with Interactive Images Inc. of Woburn, Mass., to market Easel for PM, an **object**-oriented tool for application development that allows developers to build graphical user interfaces for cooperative-processing applications...

...Manager. Applications Manager lets developers build complete applications, including CUA-compliant interfaces. It contains libraries of PM **function calls** and logic variables.

Developers are also offering object-oriented languages that can be applied to Microsoft windows, X **windows** and the Macintosh as well as PM.

**Graphic** Software Systems Inc. of Beaverton, Ore., is offering its Extensible Virtual Toolkit (XVT), a library of C...

...Object/1 will provide a graphical forms painter that supports the construction of data-entry and retrieval **screens linked** to modular blocks of reusable logic code.

Digital Inc. of Los Angeles will release in October Smalltalk/V for PM, an **object**-oriented programming language that will support the development of graphical PM applications.

CommonView, from Glocksenspiel Ltd., of Dublin, Ireland, is designed to ease the **transition** between **windows** and PM applications and to support the creation of **new PM applications**. It includes Glocksenspiel's C++ translator and **object** class libraries.

Easing the **transition** between **windows** and PM is also what prompted Micrografx Inc. of Richardson, Texas, to market Mirrors, a dynamic link library of PM **function calls**. Mirrors allows windows applications to run under Presentation Manager without modification.

Other development tools help programmers develop...

**15/3,K/26 (Item 26 from file: 275)**  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01260190 SUPPLIER NUMBER: 07196807 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Putting graphical interfaces into perspective: an application without representations is tyranny.**

Dahlgren, Kent  
Dr. Dobb's Journal of Software Tools, v13, n11, p32(6)  
Nov, 1988  
LANGUAGE: ENGLISH      RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 4291      LINE COUNT: 00353

... rethinking, the windowing system itself typically offloads many common chores from the application. For example, a single **function call** within the Macintosh programming environment initiates the opening of a window that allows the user to select...

...will encounter the same menu structure in different applications. This uniformity allows Macintosh users to quickly learn **new applications**.

Graphics Engine  
The Display List Manager, Mapping/Translation Layer, and Rendering Interface are collectively referred to as the Graphics Engine. Through its drivers, the Graphics Engine handles the task of putting graphical **objects** on the **screen**. Applications use the **Graphics Engine** to display **objects** within their **windows**. The user interface uses it to construct window borders, menus, screen backgrounds, and other visual elements.  
In...

15/3,K/27      (Item 27 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01259054      SUPPLIER NUMBER: 07186769      (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Microsoft to offer Presentation Manager version of BASIC. (product announcement)**  
Bellamah, Pat  
PC Week, v5, n50, p35(1)  
Dec 12, 1988  
DOCUMENT TYPE: product announcement      ISSN: 0740-1604      LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT  
WORD COUNT: 275      LINE COUNT: 00022

... Manager-specific version of BASIC as a high-level programming interface, said Adrian King, director of systems **software**, in a **recent** interview.

'What you really need is a language in which you can quite quickly manipulate data items...

...we are deficient and need to have tools on the market.'

This version of BASIC would offer **object**-oriented programming capabilities for Presentation Manager programs, enabling developers to easily build the many standard components of a Presentation Manager application.

The system would also include a run-time library for the **object**-oriented language to handle low-level tasks and reduce the hundreds of **function calls** that programmers must deal with. Typically, such tools enable developers to build **screens** very easily and **link** them together, King said.

Although the OS/2 software-development kit contains a dialogue-box generator and...

15/3,K/29      (Item 1 from file: 621)  
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)  
(c) 2006 The Gale Group. All rts. reserv.

01286006      Supplier Number: 45415632      (USE FORMAT 7 FOR FULLTEXT)  
**POWERCERV ANNOUNCES IMMEDIATE AVAILABILITY OF A NEW RELEASE OF ITS POPULAR OBJECT CLASS LIBRARY FOR POWERBUILDER 3.0A AND 4.0 DEVELOPERS**  
PR Newswire, pN/A

March 20, 1995  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 985

... instead of having to rely on a  
database administrator to write the call for him  
-- A tab **object**, modeled after the Microsoft Word 6.0 Options  
dialog, is easily recognizable to developers and end users...

...object with highlight and click behavior modeled  
after the Window File Manager  
-- A Sort-on-label DataWindow **object** enabling the column label to  
behave as a command button to dynamically sort on that column  
-- A trace/debug popup for display and logging of relevant  
information during application development  
-- A string "peek" **object** for display and manipulation of string  
data during application execution  
-- Content level help mechanism for including MicroHelp and Help  
file keywords on any and all PowerTOOL **objects** in an **application**.  
-- **New** method which returns the DataWindow in a chain which  
generated an error  
In addition to the new features, PowerTOOL includes an  
inheritance methodology that promotes PowerBuilder's **object** oriented  
features; full support for stand-alone Multiple Document Interface  
(MDI) applications, including sheet and key management; simpler  
window hierarchy for MDI and Single Document Interface (SDI)  
applications; an intersheet communication **object** that elegantly  
supports complex interaction between MDI sheets and **windows**; a  
**linked**  
list of DataWindows controls that update any number of DataWindows  
with a single **function** call; data driven navigational control; and  
application security. PowerTOOL documentation consists of a 400-page  
Developer's Reference...

...Tim Vogel, senior technology analyst at KFC. "This release  
gives us stronger inheritance and true Windows style **objects**. We  
have many **new applications** underway. Our developers will be more  
productive using PowerTOOL, and the consistent interface will help  
our users quickly integrate **new applications**."  
Pricing and availability  
PowerTOOL for PowerBuilder Enterprise is priced at \$1,200 per  
developer, with quantity discounts...

15/3,K/38 (Item 2 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2006 The Gale Group. All rts. reserv.

03815058 Supplier Number: 45443625 (USE FORMAT 7 FOR FULLTEXT)  
**USING BUSINESS OBJECTS**  
UNIX News, p53  
April, 1995  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 2754

One of the claims for **object**-oriented programming is that it makes  
it easier for software to model the real-life business situation. The **old**  
'structured procedural programming' broke the **program** down into functions.  
The problem was that only the program author really knew those functions  
inside out...

...to understand precisely what each function did. Does it make the entry  
in the database itself or **call** another **function** to do that? If the

latter, in which function is the transaction started and in which is...

...if it fails? Consider a program to control the movement of aeroplanes on a large airfield.

THE OLD WAY

The **program** would have contained a function queue planes() that enabled the controller to insert a given plane into...

...a given time. A substantial chunk of the program would have contained the code to operate a **linked** list and a **pane** into which to insert details of each plane that joined the queue.

Writing and testing this would...

**15/3,K/39 (Item 1 from file: 160)**

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01504105

**MATRIX SOFTWARE INTRODUCES SYNERGY LAYOUT FOR AUTOMATIC GENERATION OF GRAPHICS-BASED WINDOWING SOFTWARE.**

NEWS RELEASE July 28, 1986 p. 11

Matrix Software today introduced a **software** development **program** for its **new** Synergy Operating Environment that enables users with no programming skills to create Macintosh-like software on standard 256K IBM and compatible personal computers. The **new** Synergy **program**, called Synergy Layout, automatically generates sophisticated, **graphics**-based software by merely choosing from on- **screen** windows, menus, dialog boxes, fonts and desktop accessories and text, and by following fill-in-the-blank ...

... user- friendly software for such applications as desktop publishing and computer-aided instruction, graphic user-interfaces for **older** text-oriented **software**, **software** demos and user-interface design and modeling. Layout has been designed to allow users to create 75...

... to be compiled by programmers. Programmers can also take advantage of the Synergy Operating Environment's 170 **function** **calls**, allowing for resource and memory management, clipboard, **graphics** primitives for generation of **screen** **objects**, and other powerful functions.

...

**15/3,K/40 (Item 1 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB  
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08145729 SUPPLIER NUMBER: 17451483 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Software evolves to visual methods. (includes related article)**

Pasquarette, John

Electronic Design, v43, n17, p117(5)

August 21, 1995

ISSN: 0013-4872

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 3307

LINE COUNT: 00278

... You build your GUI interactively. Most visual programming tools provide a drag-and-drop editor for building **windows** GUIs. The days of using hundreds of **graphics** library functions to create, position, and customize display **objects** are over. User interface development, traditionally one of the most time-consuming programming tasks, is now as ...

...Once you have finished building your GUI, you save it in a binary format that you can **update** at **program** runtime. Each GUI **object** has its own



set of properties or attributes that you can change using a simple **function call**. For example, if you create a pushbutton in Visual Basic, you can change the label of the...  
...interactively build your GUIs in a drag-and-drop editor, you do not sacrifice any flexibility at **program** runtime. You can easily change, **update**, or manipulate your GUI through standard functions in your program.  
You have fewer functions to remember. When...

**15/3,K/41 (Item 2 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB  
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06510571 SUPPLIER NUMBER: 13756265 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**windows developers get object lessons. (object-oriented programming tools)**  
**(Buyers Guide)**

Parker, John  
Datamation, v39, n6, p94(4)  
March 15, 1993

DOCUMENT TYPE: Buyers Guide ISSN: 1062-8363 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1482 LINE COUNT: 00122

... became a subsidiary last summer of Easel Corp., and in November, Easel announced Enfin/ 2 Windows, an **object** -oriented development tool based on Smalltalk. According to product manager Andy Ellicott in Easel's Burlington, Mass...

...for client/server applications. A key question for these users, says Ellicott, is whether they can extend **OOP** principles to business logic, creating classes of **objects** that represent companies or individuals within them.

Leading Smalltalk vendor ParcPlace Systems, meanwhile, has decided to keep...

...Motif platforms, without recompiling, no matter where it was written. The GUI builder in VisualWorks has a **function** called ChameleonView, which lets developers preview a **new application** interface.

While Powersoft Corp. of Burlington, Mass., designed the first version of its PowerBuilder client/server development environment to support **object** -oriented programming, the **OOP** interface wasn't released until ...says president David Litwack, is that "MIS has enough of a leap to make with SQL and **graphic** scripting. COBOL to **windows** /PC is a big jump.

"Some environments build up from primitive **objects**, but our customers don't want to do that," says Litwack. "They want to create windows ancestors..."

...You might have 50 to 100 windows in an application, in as many as five styles. With **object** orientation, for example, you could apply user interface styles across a corporation by creating ancestor **objects** and inheriting from those. We find that after a while users push 80% of the code onto...

**15/3,K/42 (Item 3 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB  
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06465922 SUPPLIER NUMBER: 13752496 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Graft windows programs to your custom software and reduce your workload.**  
**(Microsoft Windows) (Tutorial)**

Tolson, Bill  
EDN, v38, n8, p185(3)  
April 15, 1993

DOCUMENT TYPE: Tutorial ISSN: 0012-7515 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1556 LINE COUNT: 00119

... LIB library file in DOS and a DLL file in windows is that a .LIB file comprises **object** code linked into a program file at link/compile time. In DOS programs, each DOS .EXE program...

...own copy of each .LIB file, greatly increasing the size of each program. A DLL file comprises **object** code **linked** dynamically into a **windows** program (.EXE file) only at runtime as necessary. DLLs decrease the size of a windows .EXE file...

...DLL is that several executing windows .EXE programs can use the same DLL. Luckily, many of the **new** windows **programs** can call foreign DLLs, not just their own.

So how does a DLL solve the problem? Newer...

**15/3,K/43 (Item 1 from file: 15)**  
DIALOG(R)File 15:ABI/Inform(R)  
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01042137 96-91530  
**Momentum takes new tack with middleware offerings**  
Cox, John  
Network World v12n21 PP: 18 May 22, 1995  
ISSN: 0887-7661 JRNL CODE: NWW  
WORD COUNT: 463

...TEXT: use mouse clicks to link different applications.

The announcements are part of Momentum's plan to apply **object** technology to middleware so corporate developers can more easily employ an array of communications technologies and application...

...high-speed connections between heterogeneous LAN-based applications, and MessageExpress, a guaranteed-delivery messaging system aimed at **legacy applications** linked via WANS. Momentum now plans to incorporate other communications mechanisms, such as **object** request brokers, into InterFlow.

The product unification finalizes a process begun in 1993 when Momentum merged with...

...acquired one of its own customers, a software vendor called Industrial Systems Machines, which had built an **object**-oriented, graphical development environment called TeamLeader around the XIPC API. TeamLeader has been renamed VisualFlow and now works with InterFlow.

VisualFlow has a catalog in which hundreds of ready-to-use **objects** are packed into some 40 **object** classes. Developers select the **objects** they need, drag them onto a separate **screen**, **connect** the **objects** using a **screen** and then test the system, according to David Gusick, vice president of industry solutions at Momentum here.

The **objects** handle data translations and the other tasks needed to move data between applications. The **objects** also create communications links using an array of different mechanisms, such as messaging, remote **procedure call** and SQL. A software developers' kit lets programmers create their own objects and add these to the...

**15/3,K/50 (Item 1 from file: 810)**  
DIALOG(R)File 810:Business Wire  
(c) 1999 Business Wire . All rts. reserv.

0341928 BW662

**EDIFY CORP: Edify extends Electronic Workforce software to automate desktop applications**

June 28, 1993

Byline: Business Editors & Computer Writers

...ALL-IN-ONE, and HP's OPEN Mail.

-- Client/Server Applications: In support of the downsizing of **legacy applications** to client/server environments, Edify's software can now work with popular client/server applications running on...

...from within an Edify workflow, developers can link software agents to database APIs such as SQL, remote **procedure call** APIs such as NetWise RPC, mail APIs such as VIM and MAPI, and telephony APIs such as Microsoft's TAPI. Access to DLL calls also makes it possible for developers to **link** Edify software agents with **windows**-based PC applications using MicroSoft's DDE and **OLE** capabilities.

The Edify Electronic Workforce Release 2.2 is available immediately with support for PC applications on...

29/9/8 (Item 8 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01676492 SUPPLIER NUMBER: 15306378 (THIS IS THE FULL TEXT)  
**IBM's VisualAge environment: a developer's dream come true. (Up Periscope)**  
**(Column)**

Machrone, Bill  
PC Week, v11, n14, p83(1)  
April 11, 1994

DOCUMENT TYPE: Column ISSN: 0740-1604 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 556 LINE COUNT: 00042

**ABSTRACT:** IBM's new Smalltalk-based VisualAge development environment is a tremendously exciting product because it is object-oriented, fully visual and works well for both individual developers and development teams. Applications and GUIs can be built by clicking and drawing connections between icons; a comprehensive set of dynamic link libraries supports encapsulation and reuse of legacy code. So-called 'modules' or 'subroutines' are simply parts in today's programming paradigm; VisualAge ships with more than 2,000 parts. IBM has made a high-level commitment to object programming, although it is not well-recognized in the Smalltalk field; some aspects of development remain disparate in the marketplace. IBM has no track record in object-oriented languages other than C++; it acquired the technology underlying VisualAge from Object Technologies International. The three great strengths of the new product are visual development, database access and support for legacy code; it creates classes of fabricators, builders and end users.

**TEXT:**

VisualAge is the most exciting development tool I've seen --that I can talk about -- in a long time. It's IBM's new visual development environment, and it's a knockout.

VisualAge is a fully visual, **object** -oriented environment that works well for individual developers and has impressive features for teams. It lets you build applications and GUIs by pointing and clicking and drawing connections from one place to another. Behind the pretty face is a wide range of tools and functions, including an interface to relational databases such as DB2, Oracle, and Sybase. Equally or more important is a comprehensive set of DLL services that allow you to encapsulate, use, and reuse legacy code, including smart input and output interfaces that let you do pre- or post-processing on the data being passed between the **legacy** code and the **applications** you're generating.

Back in the old days, we used to call them subroutines or modules. Today, they're just parts. VA ships with more than 2,000 parts, ranging from highly granular or detailed processes to complex operations. You drag the parts you need to the work area on your **screen**, then **connect** them with arrows in the order you want. Additional arrows point to the input and output fields and buttons on the screens you design. Encapsulated **legacy apps** become parts, and you communicate with them in the same way. VisualAge applications can be surprisingly complex without writing a line of code. If you do need to write code, you drop into Smalltalk.

Smalltalk and IBM? The two aren't exactly a recognized team, and therein lies a tale. IBM has made a high-level commitment to **objects**, open platforms, and interoperability. To do so, it has had to expand its portfolio of languages and competencies. While the objectmeisters in Austin and the Taligent toilers work on the underpinnings of the future, the languages folks have branched out to give us more **object** -oriented development environments such as VisualAge.

These disparate pieces will take time to reach a common ground. IBM, with no track record in **object** -oriented languages outside C++, acquired the technology underlying VA from **object** Technologies International. OTI's products are robust and well respected by the **object** -oriented crowd and by Smalltalk insiders in particular. The first iteration of VisualAge

will not have SOM support, but a follow-on release will address SOM objects, including the ability to create them in Smalltalk.

VA has three great strengths: visual development, database access, and use of legacy code. It creates three tiers of users: fabricators, builders, and users. Only fabricators need to know Smalltalk; the rest can use and reuse the available objects and database links. Big companies won't bat an eye at VA's \$5,000 price for the team edition. The \$2,500 price might give pause to single users, but it's competitive with PARTS, Enfin, and PowerBuilder. I'd love to see a version priced below \$500 to compete with Visual Basic. Developers won't object to running a 24M-byte 486, but users will have a tougher time coming up with 12M bytes to run compiled apps quickly. Still, this product is too good to leave in the IS department.

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29/9/32 (Item 3 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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07856200 SUPPLIER NUMBER: 16624760 (THIS IS THE FULL TEXT)  
**Tap into a rich legacy of data. (includes related article on the future of 3270 screens) (Tutorial)**  
Darling, Charles B.  
Datamation, v41, n1, p65(3)  
Jan 15, 1995  
DOCUMENT TYPE: Tutorial ISSN: 1062-8363 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1736 LINE COUNT: 00153

ABSTRACT: 'Legacy extension software' allows organizations to convert their mainframes into client/server application servers while protecting time-tested applications. Legacy extension software is more complex and functional than screen scrapers. It is provided by terminal-emulation vendors such as Attachmate that have found themselves in the application development business, and development-tools vendors such as Knowledgeware that are now writing tools for the mainframe. The terminal-emulation vendors are enhancing their products with high-end GUI functionality and access to the HLLAPI API. In contrast, development-tools vendors are rolling out high-level, mainframe-centric development environments that sit atop connectivity products such as Wall Data's Rumba.

TEXT:

Is managers everywhere should flinch when another young hotshot suggests tossing out that dusty old mainframe app and whipping together a client/server wonder to replace it.

That mainframe app may well be the result of 20 years or more of progressive refinement. It may well embody the collective wisdom of a generation of workers-the rules and information structures that run the business, that in a very real sense are the business.

And the young hotshot's gonna rebuild the entire edifice in how many weeks?

A rock to your left, and those oh-so-familiar user complaints about the mainframe in that hard place to your right. Is there enough daylight between the two for us to squeeze through?

Quite possibly. Would it help to have powerful tools that let existing mainframe applications suit up and play ball in the new arena of PCs and empowered users? Kevin Schick of the Gartner Group thinks so: 85% of existing mainframe apps will stay right where they are to take advantage of mainframe security, performance, and reliability, he figures. Nick Donofrio, head of IBM's Large Scale Computing Division, thinks so too. He foresees price/performance doubling every 18 months in CMOS-based mainframes like the System/390 Parallel Enterprise Server. It seems that the writing on the glass wall says "application server." And the thing that will help turn the mainframe into an application server is what Gartner calls "legacy extension software."

OK, I know what you're thinking: screen scrapers. Nope, you're wrong. These are real tools. Legacy extension software has dealt with the performance and functionality limitations (and shuns the hype) that has made "screen scraper" a term of derision. The software can do more than just replace a 3270 screen with a windows interface. Now we face the challenge of, as Schick says, "understanding where legacy extension fits in our overall client/server strategy, reconciling our client/server strategy with our legacy strategy."

WHAT IS LEGACY EXTENSION?

You'll find legacy extension software swimming in the convergence of two broad streams: terminal emulation companies that have backed into the app development business, and app dev people who have branched out to create tools to exploit the mainframe.

Companies like Attachmate and Wall Data built their reputations on terminal emulation and mainframe connectivity. But in today's interoperating, pull-down, drag-and-drop world, mere connectivity is no

longer enough. To stay alive in this market segment, these and dozens of other connectivity vendors are beefing up their products with sophisticated GUI functionality and access to the HLLAPI API for controlling 3270 sessions.

The other side of the legacy extension arena is populated with products like Mozart (from the company of the same name) and Knowledgeware's FlashPoint. These products introduce a mainframe-aware, high-level application development environment and ride on top of connectivity products like Extra! For Windows or Wall Data's Rumba.

In this segment of the legacy extension marketplace, the rallying cry is "ease of development!" You don't have to be a COBOL programmer. Point-and-click development tools let you manipulate objects and events tailored to mainframe connectivity and mainframe apps. High-level scripting languages hide many of the details of HLLAPI but give you the control to navigate through multiple mainframe sessions or add business logic to the client side.

#### BUILDING ON THE LEGACY

With products stretching from simple terminal emulators to advanced app dev environments, what should you use? Depends on the challenge you face. Perhaps the simplest challenge to deal with are users who want to get the 3270 terminals off their desks and see their old, familiar screens in a window on their PCs.

When the challenge is more than freeing up a corner of the user's desktop, you'll take the next step up the ladder: programming tools. At Liebert Corp., a maker of computer-room air-conditioners in Columbus, Ohio, senior project leader Mike Pittman needed some of the benefits of EDI but couldn't stomach the time and expense of real EDI software. His solution: Build a fax-enabled, mail-enabled application in Visual Basic on a PC and link it to the mainframe's purchasing programs.

Pittman combined Extra! For Windows and Extra! Tools For Visual Basic so he could use VBX controls to manage the connection to the mainframe. With calls to Attachmate's Common Function Library, he took control of the mainframe application via HLLAPI. The result: a program that finds and downloads 150 to 200 purchase orders a day from the mainframe and sends each via DDE to Delrina's WinFax PRO for faxing to the appropriate supplier. The purchasing department is kept in the loop with e-mail sent automatically VIM and Lotus's cc:Mail.

The Network Systems division of AT&T faced an even tougher challenge. Whenever one of its mainframe systems didn't have a price for a given product, users trying to enter an order for that product took a terrible productivity hit. They would have to go to one screen to get a list of the product's components, scribble down the part number for each component, then go to another screen and enter each part number to see its price. Half an hour later, they might have the list of prices they needed to add together to get the price they were looking for.

No amount of mapping mainframe screens onto sexy GUIs would solve this problem. But productivity surged upward when IS presented the users with a FlashPoint application that automatically slammed together component prices to create a product price. Nothing had changed on the mainframe, but what had taken 30 minutes of mind-numbing clerical effort was reduced to a 35-second pause, as FlashPoint tickled the appropriate 3270 screens behind the scenes. Automating this painful, repetitive chore gave the users a serious incentive to embrace the pleasant new face on an old mainframe application.

As for any product, picking legacy extension software has to start with a hard look at where you're at and where you're headed. If you are already committed to client/server development in a language like PowerBuilder or Visual Basic, then that should shove you in the direction of legacy extension tools that use those languages. If you want the high degree of extensibility and reusability that you get with objects like Visual Basic's VBX controls, that'll obviously shove you in another direction.

But maybe your programmers know COBOL and aren't ready for the leap to PC-style programming. Or maybe you need to develop and deploy this project in a big rush. In these cases, the higher-level approach like

ClientBuilder and Mozart looks more appealing.

Another key thing to worry about: will the mainframe be unplugged someday? If downsizing is definitely in your future, then you'd better look carefully at how easily you can unplug the 3270 data stream from one of these legacy extension applications and swap in calls to an SQL database.

In selecting legacy extension application development and deployment tools, price counts. QuickApp from DCA plus Microsoft's Visual Basic, for example, costs around \$1,500 for the developer, with no runtime. Mozart's Composer development environment, on the other hand, will set you back \$4,000 to \$6,000, plus another \$10,575 a year for phone support and upgrades. And to deploy the result, you'll need Mozart runtimes, say \$15,000 for 100 seats. Ouch.

In both cases, you'll still need to buy connectivity software. DCA's Irma For The Mainframe would do the trick in both of our examples. It lists for \$39,500 for 100 seats.

#### LIFE SUPPORT OR LAUNCHING PAD

Sure, legacy extension software can be life-support for a dying mainframe app. Or it can be a strategic launching pad for a new generation of distributed, cooperative applications built on the solid foundation of your best legacy efforts. The Westport, Conn.-based Meta Group sees legacy system encapsulation as more and more important in the second wave of client/server applications. As application logic migrates off the client and onto various application servers, legacy extension software becomes a key tool to tie together presentation logic on the desktop, new application logic in reusable **objects** on a UNIX application server (for example), and legacy logic served up via 3270 data streams from the mainframe.

When you downsize that mission-critical app into an all-new client/server incarnation, you're definitely working with the latest, greatest technology. But not everything can be downsized. Not everything should be downsized. **Legacy extension software** lets you look beyond that ugly green or amber screen and discover the inner strength and staying power of your mainframe apps.

#### Glimpses of the Future

While everyone has been slamming the mainframe, some innovative vendors have been working on products that do more than map 3270 screens to pretty GIUs.

Rather than match strings of text, ClientSoft's ClientBuilder recognizes mainframe screens through fuzzy logic, making the new front end less sensitive to changes in the **legacy app**. And ClientBuilder treats the 3270 data stream as an **object** with properties, so you can easily replace that **object** with another **object** linked to a SQL database if the **legacy app** ever goes away.

ClientBuilder also decouples the GUI from the flow of mainframe screens by making the front end event-driven. Chuck Kensicki, in charge of financial systems for 22 California State University campuses, struggled for three months to extend his **legacy app** with Easel's ESL Renovator. Like most other legacy extension products, Easel requires procedural logic to define every possible **sequence** of mainframe **screens**. Debugging was a nightmare. Frustrated, Kensicki approach to legacy extension: "The debugging time with a procedural tool was probably 20 times what it was with ClientBuilder."

Apertus Technologies serves up another slice of the future in its Enterprise/Access, a server-based approach to encapsulating **legacy applications**. Park your **legacy** extension server in the glass house, and host connections can be handled across high-speed com channels, giving the user better response the administrator a more manageable and resource-efficient architecture.

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**29/3,k/2 (Item 2 from file: 275)**  
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01835844 SUPPLIER NUMBER: 17413949 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Not your father's VB. (Visual Basic 4.0) (Software Review)(Evaluation)**  
Bonner, Paul  
Windows Sources, v3, n10, p19(1)  
Oct, 1995  
DOCUMENT TYPE: Evaluation ISSN: 1065-9641 LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 656 LINE COUNT: 00058

... language dialect, the development environment, the custom-control interface, and the target operating system. Excel's more **object**-oriented VBA (Visual Basic for **Applications**) engine replaces plain **old** Visual Basic. While testing our beta version, we found enough dissimilarities in syntax to annoy us--but the better **object** structure really made a difference when we created an **OLE** automation server to feed system information to Excel. VB 4.0's development environment introduces a new editor, an **object** browser, and support for third-party add-ins. And **OLE**-based OCMs replace the venerable VBX format. Although the package includes both 16- and 32-bit versions...

...s ability to vastly simplify complex operations. Visual Basic 1.0 and 2.0 made developing simple **windows** applications an **order** of magnitude easier than before; Visual Basic 3.0 did likewise for database applications. Now, Visual Basic 4.0 performs the same magic for the incredibly complex world of **OLE** automation.

Microsoft has enhanced VB's capabilities as a container and controller of **OLE objects**, allowing it to directly manipulate the properties and methods of **OLE automation objects**. In addition, you can add those **objects** to VB's toolbox; for instance, we could access an Excel worksheet on a form as easily...

**29/3,k/3 (Item 3 from file: 275)**  
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01805753 SUPPLIER NUMBER: 17244492 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Desktop-host link sports OLE; Proginet to unveil windows 95, NT client-to-mainframe package. (Fusion File Transfer and Management System protocol gateway software)(Product Announcement)**  
Musich, Paula  
PC Week, v12, n27, p8(1)  
July 10, 1995  
DOCUMENT TYPE: Product Announcement ISSN: 0740-1604 LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 443 LINE COUNT: 00038

ABSTRACT: Proginet Corp announces Fusion File Transfer and Management System, which **connects windows 95** and **windows NT** desktops to IBM mainframes via Microsoft's SNA Server for NT. The Fusion package consists of...

...processor system. The Fusion package will provide help at sites where desktop users need to communicate with **legacy applications**. Proginet is the first vendor to implement the **OLE** interface in MVS.

**29/3,k/5 (Item 5 from file: 275)**  
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01702774 SUPPLIER NUMBER: 16261660 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Toys or power tools? With money, skill and time, you can push the limits of  
"first-generation" GUI builders. (PC Week Client/Server Deployment)**  
Scheier, Robert L.  
PC Week, v11, n38, p17(2)  
Sept 26, 1994  
ISSN: 0740-1604 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1071 LINE COUNT: 00087

...ABSTRACT: Ray Koukari is sold on Microsoft Corp's first-generation Visual Basic programming tool. Koukari used the **software** to rewrite Arctco's **legacy** COBOL manufacturing system onto the company's client/server platform. The resulting manufacturing system supports 230 users on 15GB Btrieve- **connected windows** clients and offers crucial performance/cost advantages. By contrast, Gore-Tex Fabric Div systems analyst Scott Yawger...

...generation tools offer limited functionality and lack application administration and management capabilities as well as a true **object**-oriented structure and support for team programming. Vendors of the leading products counter that such limits are...

**29/3,K/7 (Item 7 from file: 275)**  
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01681147 SUPPLIER NUMBER: 15358624 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**An innovative PIM links up your data. (Software Review) (CrossTies Software Corp's CrossTies 1.0) (Evaluation)**  
Haskin, David  
Computer Shopper, v14, n6, p366(1)  
June, 1994  
DOCUMENT TYPE: Evaluation ISSN: 0886-0556 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1010 LINE COUNT: 00081

... sending and receiving E-mail on VIM- and MAPI-compliant systems, automatically adding messages and attachments as **objects**.

Creating Links

After creating an object, you establish links to related objects, a process CrossTies makes laudably...

...those objects. After picking an object from the list, click a button to create the link.

The **objects** linked to a task, for example, could include contact records for all the people involved with that task, as well as E-mail, faxes, memos, and spreadsheets related to it. **Objects** linked to a person might include all memos, faxes, and E-mail messages you've exchanged with that person, plus records of appointments.

You view information about an **object** in a dialog box virtually identical to the one used to create the **object**. Listed in that dialog box are all **linked objects**, which you view by double-clicking on your choice.

At that point, CrossTies opens another dialog box displaying information about the linked **object**, such as the time and date of an appointment **object**. This information can also include a list of **objects** linked to it, any of which you can view or launch. In this way, you start with a complete set of related information, but you can follow a trail of **objects** as well, which can lead to information you never expected to find.

These innovative capabilities allow CrossTies to serve as an **object**-oriented windows shell that's more like the Macintosh environment or Hewlett-Packard's NewWave than Windows' Program Manager. Because CrossTies also lets you optionally maintain your **old program** groups, however, this environment will remain familiar even to new Windows users. Yet it's

also more powerful--and more futuristic--than environments like NewWave, because CrossTies' webs of interrelated **objects** help you feel unusually connected to all your information.

There are, however, some limitations. If you want to delete or link 20 **objects**, you must do it one at a time, which quickly becomes irritating. You can automate many CrossTies...

**29/3,k/8 (Item 8 from file: 275)**

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01676492 SUPPLIER NUMBER: 15306378 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**IBM's VisualAge environment: a developer's dream come true. (Up Periscope)**  
**(Column)**

Machrone, Bill

PC Week, v11, n14, p83(1)

April 11, 1994

DOCUMENT TYPE: Column ISSN: 0740-1604 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 556 LINE COUNT: 00042

VisualAge is a fully visual, **object**-oriented environment that works well for individual developers and has impressive features for teams. It lets you...

...output interfaces that let you do pre- or post-processing on the data being passed between the **legacy** code and the **applications** you're generating.

Back in the old days, we used to call them subroutines or modules. Today...

...detailed processes to complex operations. You drag the parts you need to the work area on your **screen**, then **connect** them with arrows in the order you want. Additional arrows point to the input and output fields and buttons on the screens you design. Encapsulated **legacy apps** become parts, and you communicate with them in the same way. VisualAge applications can be surprisingly...

...exactly a recognized team, and therein lies a tale. IBM has made a high-level commitment to **objects**, open platforms, and interoperability. To do so, it has had to expand its portfolio of languages and...

...work on the underpinnings of the future, the languages folks have branched out to give us more **object**-oriented development environments such as VisualAge.

These disparate pieces will take time to reach a common ground. IBM, with no track record in **object**-oriented languages outside C++, acquired the technology underlying VA from **Object Technologies International**. OTI's products are robust and well respected by the **object**-oriented crowd and by Smalltalk insiders in particular. The first iteration of VisualAge will not have SOM...

**29/3,k/9 (Item 9 from file: 275)**

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01551962 SUPPLIER NUMBER: 13082987 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Borland Pascal with Objects 7.0. (DOS and Windows development environment from Borland International) (Software Review) (Shortlist) (Evaluation)**

Aldred, Clive

PC User, n200, p56(1)

Dec 16, 1992

DOCUMENT TYPE: Evaluation ISSN: 0263-5720 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 394 LINE COUNT: 00033

Product Borland Pascal with **Objects** 7.0 Supplied by Borland Tel  
(0734) 321 150

Overall evaluation 8

Pascal with **Objects** 7.0 is the latest upgrade to a stable of  
development products, and replaces Turbo Pascal Professional...

...but also the entry-level Turbo Pascal 7.0, for users new to programming.  
Borland Pascal with **Objects** continues to expand the flexibility of  
the Pascal language. It allows developers to create Protected mode  
applications...

...for code and data. This allows programmers to process larger amounts of  
data more efficiently. Pascal with **Objects** also makes it possible to  
create DOS and **Windows** Dynamic **Link** Libraries (DLLs). Any developers  
wishing to exploit DLLs previously written in C/C++ can now do so...

...includes ObjectBrowsers for both DOS and windows, which allow developers  
to search source code quickly either by **objects**, units or globals. The  
browser can display information in hierarchical form, as well as all  
reference to...

...Workshop lets you visually design your user interface.

Just in case you need to speed up your **old applications**, Borland  
has added six new compiler optimisations, including 80386 32-bit maths  
operations, allowing you to recompile...

...25Mb).

Documentation is comprehensive and exceedingly bulky, and our review  
version--a beta copy -- of Pascal with **Objects** 7.0 swallowed 29Mb of hard  
disk.

To complement the paper documentation, there's online help, which...

**29/3,k/17 (Item 1 from file: 621)**

DIALOG(R)File 621:Gale Group New Prod.Annou.(R)  
(c) 2006 The Gale Group. All rts. reserv.

01321480 Supplier Number: 45939381 (USE FORMAT 7 FOR FULLTEXT)  
**SCO announces windows integration products for business critical  
environments.**

Business Wire, p11150167

Nov 15, 1995

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 654

... print services. These products will be available in December 1995.

"Customers want to create integrated systems by **linking** their  
**Windows** desktops to UNIX Business Critical Servers," said Alok Mohan,  
president and chief executive officer at SCO. "These...

...emulation package that provides windows users with full access to UNIX  
character-based applications, files and services.

**OLE** 2 automation technology allows customers to dynamically link and  
update UNIX data directly to and from Microsoft windows-based applications,  
such as Excel. The solutions builder can reincarnate **legacy applications**  
by using programming tools, such as Microsoft Visual Basic, to develop a  
complete windows front end.

Using...

**29/3,k/19 (Item 3 from file: 621)**

DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

(c) 2006 The Gale Group. All rts. reserv.

01189465 Supplier Number: 42892431 (USE FORMAT 7 FOR FULLTEXT)  
**ENHANCED USER FLEXIBILITY IS KEY TO NEW NBI LEGACY WINDOWS WORD PROCESSOR**  
News Release, p1  
April 6, 1992  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 626

... collateral and other documents that  
integrate graphics and text. Key new features include a customizable  
icon bar, **OLE** support, standard dialog boxes and drag and drop  
functionality.

"User flexibility has always been a primary driving...

...functions. By developing customized icon bars users are automatically  
able to raise their efficiency in document creation.

#### **OLE Support**

Legacy 2.1 provides **OLE** ( **Object** Linking and Embedding) facilities  
thereby enhancing Legacy's integration with other popular windows  
**applications** . Using the new **OLE** support, **Legacy**  
2.1 users can now  
embed graphics and tables from other software applications. All  
applications which support the Microsoft **OLE**  
standard can be embedded  
using, Legacy's sophisticated frame architecture.

#### **Drag and Drop**

Legacy 2.1 has added...

...adopting the new dialog standard, 2.1 users will appreciate the  
common interface commands across their various **applications** .

#### **Key Product Features**

**Legacy** combines high-impact word processing, desktop publishing and  
graphics capability in a single easy-to-use **software** package.

**Legacy**  
features a fully interactive environment providing an intuitive and  
visually accurate approach to document production. Other features...

...editors; 25 pre-defined document  
templates; in-depth kerning, leading and wordspacing controls;  
extensive layout flexibility, including **linked frames** , DDE and

**OLE**  
file linking with other applications and complete import/export  
capabilities. Specific advanced word processing features include  
macros...

**29/3,k/28 (Item 3 from file: 16)**  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2006 The Gale Group. All rts. reserv.

02046173 Supplier Number: 42641391 (USE FORMAT 7 FOR FULLTEXT)  
**The World of Objects: Much More Than Meets the Eye**  
Network Computing, p88  
Jan, 1992  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 3399

... rather than having to build some routine that does this, the programmer simply goes to an appropriate **object** library and grabs the appropriate object that provides the needed functionality.  
In the real world, objects quickly...

...Object-oriented techniques refers to the collective and relatively complex programming methodology required to work in an **object** -based environment, as described above.

User programs, application programs and systems programs built using **OOP** techniques will almost always appear as plain **old programs** to a user. Operating systems built using **OOP** techniques will almost always appear as the same non- **OOP** operating systems that a user has always known.

What does begin to change, however, is not the...

...end user. It is at this level of application integration that parallels with the atomic level of **objects** that programmers use can be drawn with respect to the larger world of users. Thus, **Object** -Oriented User Platforms are those platforms in which **object** -oriented approaches that programmers use to build programs are extended out to a higher level.

A true **object** -oriented approach to platform and application integration does not yet exist, simply because the necessary technology and standards for **object** -oriented approaches to an **object** -oriented world are not yet available. The current state of technology does, however, allow for some **object** -like approaches to operating system platforms and application integration.

An operating platform such as windows can allow some degree of **object** -like behavior. For example, establishing hot **links** under **windows** , where a change in one spreadsheet may cause a simultaneous change in another spreadsheet, which may cause...

29/3,K/32 (Item 3 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2006 The Gale Group. All rts. reserv.

07856200 SUPPLIER NUMBER: 16624760 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Tap into a rich legacy of data. (includes related article on the future of 3270 screens) (Tutorial)**

Darling, Charles B.  
Datamation, v41, n1, p65(3)  
Jan 15, 1995

DOCUMENT TYPE: Tutorial ISSN: 1062-8363 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 1736 LINE COUNT: 00153

... becomes a key tool to tie together presentation logic on the desktop, new application logic in reusable **objects** on a UNIX application server (for example), and legacy logic served up via 3270 data streams from ...

...working with the latest, greatest technology. But not everything can be downsized. Not everything should be downsized. **Legacy extension software** lets you look beyond that ugly green or amber screen and discover the inner strength and staying...

...recognizes mainframe screens through fuzzy logic, making the new front end less sensitive to changes in the **legacy app** . And ClientBuilder treats the 3270 data stream as an **object** with properties, so you can easily replace that **object** with another **object** linked to a SQL database if the **legacy app** ever goes away.

ClientBuilder also decouples the GUI from the flow of mainframe screens by making the...

...charge of financial systems for 22 California State University campuses, struggled for three months to extend his **legacy app** with Easel's ESL Renovator. Like most other legacy extension products, Easel requires procedural logic to define every possible **sequence** of mainframe **screens**. Debugging was a nightmare. Frustrated, Kensicki approach to legacy extension: "The debugging time with a procedural tool...

...serves up another slice of the future in its Enterprise/Access, a server-based approach to encapsulating **legacy applications**. Park your **legacy** extension server in the glass house, and host connections can be handled across high-speed com channels...

**29/3,k/36 (Item 7 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2006 The Gale Group. All rts. reserv.

07259591 SUPPLIER NUMBER: 15184413 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Effective planning reduces programming needs.**

Lohr, Gregory

Telemarketing, v12, n9, p56(5)

March, 1994

ISSN: 0730-6156

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 2632 LINE COUNT: 00217

... note that a well-designed windows application may change the default key functions described.

The impact of **Windows OLE (Object Linking and Embedding)** should also be closely examined if you are planning to integrate data from third-party applications. Since **OLE** basically encapsulates DDE (Dynamic Data Exchange) command character sequences, and the standards for such sequences are ambiguous, at best, you must verify each application's **OLE** use with each of the others. **OLE 2.0**, the latest version, helps correct this problem to some extent. Make an entry under the...

...in your Requirements Definition.

The windows GUI is definitely a better platform from which to use business **applications** when compared to the **older**, more traditional text-based environment, but it is not a panacea for all user training and ease...

**29/3,k/38 (Item 9 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB  
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05816099 SUPPLIER NUMBER: 12018828 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**NEW NBI LEGACY(R) VERSION SUPPORTS MICROSOFT WINDOWS 3.1-CUSTOMIZABLE ICON BAR, OLE AND DRAG AND DROP FUNCTIONALITY LEAD AS NEW FEATURES**

PR Newswire, 0406A5271

April 6, 1992

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 664 LINE COUNT: 00056

... collateral and other documents that integrate graphics and text. Key new features include a customizable icon bar, **OLE** support, standard dialog boxes and drag and drop functionality.

"User flexibility has always been a primary driving...

...functions. By developing customized icon bars, users are automatically able to raise their efficiency in document creation.

**OLE Support**

Legacy 2.1 provides **OLE (Object Linking and Embedding)** facilities thereby enhancing Legacy's integration with other popular windows **applications**. Using the new **OLE** support, **Legacy 2.1** users can now

embed graphics and tables from other software applications. All applications which support the Microsoft **OLE** standard can be embedded using Legacy's sophisticated frame architecture.

Drag and Drop

Legacy 2.1 has...

...adopting the new dialog standard, 2.1 users will appreciate the common interface commands across their various **applications**.

Product Features

**Legacy** combines high-impact word processing, desktop publishing and graphics capability in a single easy-to-use **software** package. **Legacy** features a fully interactive environment providing an intuitive and visually accurate approach to document production. Other features...

...25 pre-defined document templates; in-depth kerning, leading and word spacing controls; extensive layout flexibility, including **linked frames**, DDE and **OLE** file linking with other applications and complete import/export capabilities. Specific advanced word processing features include macros...

**29/3,K/40 (Item 1 from file: 15)**

DIALOG(R)File 15:ABI/Inform(R)

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01132925 97-82319

**Grown-up HyperAccess gets a face-lift, boosts speed**

Zelinka, Douglas A

Infoworld v17n50 PP: 136 Dec 11, 1995

ISSN: 0199-6649 JRNL CODE: IFW

WORD COUNT: 433

...TEXT: Dual Standard fax/modem. HyperAccess has a long list of supported modems.

I launched the separate conversion **program** to convert my **old** HyperAccess 5 phone book to the new format; it also converts dialing directories from many flavors of...

...custom buttons, or the command line. You can also dial by dragging and dropping a phone book **object** to the Terminal Panel tab.

Automation is now more flexible and extensible because HyperAccess uses Rexx as...

...system in the phone book and then clicking on a camcorder icon. When my modem established a **connection**, a scrolling **window** showed Rexx code generation as I responded to remote system prompts.

Each script is a .CMD file associated with a phone book **object**. Hilgraeve's HyperAccess API can be called from Rexx, C, and other programming languages to further automate...



32/9/18 (Item 5 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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03285837 Supplier Number: 44531321 (THIS IS THE FULLTEXT)

**Micro Focus Upgrades Its COBOL-Based GUI Builder**

Open Systems Today, p12

March 21, 1994

ISSN: 1061-0839

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 504

TEXT:

By Frank Hayes

Micro Focus last week introduced a new version of its COBOL-based GUI builder for windows and OS/2. The company said the new version contains components that can automatically generate graphical user interfaces to relational databases, IBM mainframe VSAM files, and CICS and IMS host applications in COBOL.

Dialog System Professional Version 2.3 should radically improve a COBOL programmer's ability to add graphical front ends to existing mainframe applications, said Martin Snellgrove, client/server group product manager at the Palo Alto company. COBOL isn't normally well suited to client/server systems, since it is designed for applications that run on the same machine as the database.

Dialog System Professional is available now for windows and OS/2, with a list price of \$1,250. By the end of this year, Micro Focus expects to have ported DSP 2.3 to SCO Unix and IBM AIX, Snellgrove said.

The new GUI builder adds two components to the existing Dialog System 2.2 package, which is available on PCs as well as for SCO Unix and IBM AIX. Dialog System Data Access allows a COBOL developer to generate both user -interface and data-access code automatically for either relational databases or VSAM files. Snellgrove said that although much data is still stored in VSAM files, few application generators today can access that data.

In addition, the Dialog System 3270 component lets developers automatically generate graphical PC front ends for existing mainframe CICS and IMS applications. Unlike most **screen** scrapers, the mapping is automatic, because Dialog System 3270 imports the CICS Basic Mapping Support (BMS) or IMS Message Format Services (MFS) map set from the mainframe. As a result, when a **screen** is sent from the mainframe, it can be automatically recognized from the map set, and the appropriate GUI **screen** can be displayed, Snellgrove said.

**KEY ADVANTAGES**

Along with the advantages of faster and easier development, Snellgrove said, the new Dialog System approach has two key advantages. First, because the mainframe **screens** are recognized and remapped automatically, the actual user interface can be changed radically without performing any remapping to the mainframe **screens**.

In addition, because the GUI code is entirely generated in COBOL, new functionality can easily be added to the PC **screen** by a COBOL programmer without any modifications to the host application. Using Micro Focus's application-to-application interface (AAI) and the **CALLOUT function**, which allows the **calling** of external routines written in COBOL or other languages, **legacy applications** can be enhanced at the client workstation or linked to other databases, Snellgrove said.

The new version of Dialog System also includes several features that are less flashy but just as useful, said beta site user Jay Johnson, president of Advanced Logics, Clearwater, Fla. 'The 3270 component is very easy to use and very straight-forward,' said Johnson, who also said that developers at his consulting firm, which helps clients add graphical front ends to existing mainframe applications, were equally impressed by the improvements in debugging and the ability to save groups of **objects**.

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**32/3,K/1 (Item 1 from file: 275)**  
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01804824 SUPPLIER NUMBER: 17155734 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Middleware and connectivity tools.(1995 Database Buyer's Guide and  
client/server sourcebook)(Buyers Guide)**  
DBMS, v8, n6, p62(6)  
May 15, 1995  
DOCUMENT TYPE: Buyers Guide ISSN: 1041-5173 LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 9508 LINE COUNT: 00815

... Visigenic has the exclusive rights to sell the Microsoft ODBC  
internal test suites for all platforms, including **windows**. The ODBC Test  
Suites test up to the highest level of API compliance (Level 2) and to easy  
to perform testing on particular functions. Available on **windows** and  
Unix; planned for the Macintosh. Reader service #520.  
Visualworks DLL end C Connect  
ParcPlace Systems Inc...

...800-759-7272  
Completely integrated with Visualworks, a client/server development  
tool for building portable applications with **object**-oriented technology,  
Visualworks DLL and C Connect provide developers with a variety of tools  
for building interfaces with external code that uses a C-based interface.  
Developers can **call** external **functions** directly, modify external data  
**objects**, map external-data **objects** into Smalltalk **objects**, share  
**object** pointers between external code and Smalltalk applications, and lead  
and link DLLs into Smalltalk applications. Through a GUI, they let  
developers reuse **legacy** code, extend their **application** capability with  
access to their party software, minimize potential errors with a  
comprehensive toolset, and increase their...

**32/3,K/2 (Item 2 from file: 275)**  
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01804821 SUPPLIER NUMBER: 17155728 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Client/server and host app. development tools.(1995 Database Buyer's Guide  
and Client/Server Sourcebook)(Buyers Guide)**  
DBMS, v8, n6, p20(13)  
May 15, 1995  
DOCUMENT TYPE: Buyers Guide ISSN: 1041-5173 LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 20277 LINE COUNT: 01789

... for the Macintosh operating system. Provides tools and features for  
designing, developing, and managing frameworks, classes, and **objects** for  
use in development of sophisticated components and agents, including  
support for asynchronous preemptive threading, distributed proxy **objects**,  
real-time garbage collection, reconfiguration of **objects** on class  
implementation updates, and dynamically resizable **objects**. Provides  
access to the Database Suite in the AppleEvent Suite, support for Data  
Access Language/Data Access...

...Windows, and Unix. \$595. Reader service #316.

SNAP  
Template Software Inc., Herndon, VA  
703-318-1000

An **object**-oriented development environment for building distributed  
applications that is based on the concept of a template, which promotes  
large-scale code reuse. Composed of multiple components of prewritten and  
predefined software, it implements an **object** model that enables common

data representation. Integrates sophisticated GUIs, knowledge-base processing, advanced communications protocols, link to multiple relational databases, and facilities to integrate **legacy software** systems. Provides a facility called the Shared Information Base (SIB) that allows for interprocess communications among applications running on one hardware platform or multiple heterogeneous platforms. The SIB supports direct **object** sharing and dynamic- **object** updating among processes and allows remote **procedure calls** . It also provides mechanisms to reconfigure or scale distributed applications with little or no code changes. Reader...

...databases, including Oracle and SQL Server. Provides for the creation, organization, and management of database server code **objects** , including stored procedures, triggers, scripts, packages, and functions. **Objects** are stored as text in the SQL Coder repository. The repository is created in a user's...

...access to information through standard off-the-shelf report writers. Written in C++, it compiles to the **windows** interface standard and includes an editing environment with cut and paste, off-line syntax checking, and syntax...

...servers and provides full reference checking. Provides code reusability, faster implementation, and automatic code comparison. Available for **windows** and **windows** NT at \$795 for a single-user license; \$1995 for a three-user license; \$2995 for a...

**32/3,K/18** (Item 5 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)  
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03285837 Supplier Number: 44531321 (USE FORMAT 7 FOR FULLTEXT)

**Micro Focus Upgrades Its COBOL-Based GUI Builder**

Open Systems Today, p12

March 21, 1994

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 504

... lets developers automatically generate graphical PC front ends for existing mainframe CICS and IMS applications. Unlike most **screen** scrapers, the mapping is automatic, because Dialog System 3270 imports the CICS Basic Mapping Support (BMS) or IMS Message Format Services (MFS) map set from the mainframe. As a result, when a **screen** is sent from the mainframe, it can be automatically recognized from the map set, and the appropriate GUI **screen** can be displayed, Snellgrove said.

#### KEY ADVANTAGES

Along with the advantages of faster and easier development, Snellgrove said, the new Dialog System approach has two key advantages. First, because the mainframe **screens** are recognized and remapped automatically, the actual user interface can be changed radically without performing any remapping to the mainframe **screens** .

In addition, because the GUI code is entirely generated in COBOL, new functionality can easily be added to the PC **screen** by a COBOL programmer without any modifications to the host application. Using Micro Focus's application-to-application interface (AAI) and the **CALLOUT** function , which allows the **calling** of external routines written in COBOL or other languages, **legacy applications** can be enhanced at the client workstation or linked to other databases, Snellgrove said.

The new version...

...mainframe applications, were equally impressed by the improvements in debugging and the ability to save groups of **objects** .

**32/3,K/21 (Item 2 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB  
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08095416 SUPPLIER NUMBER: 17280133 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Transco creates new computer system to simplify its business. (Transco Energy Co.)**

Chun, Inja

Pipe Line & Gas Industry, v78, n7, p45(4)

July, 1995

ISSN: 1079-8765

LANGUAGE: English

RECORD TYPE: Fulltext

WORD COUNT: 1552 LINE COUNT: 00146

... data elements in more than 350 database tables. The on-line user interface contains more than 450 **windows**. This single integrated system replaces 24 **legacy** mainframe **applications**.

Reduced development time has been a bright spot in the system's implementation. Coding and testing time...

...compared to previous projects, due to the use of PowerBuilder by Powersoft, an application-development environment for **windows**. The development team used the Datawindow **object** of the development tool extensively. The **object** manipulates data from a relational database without the need to code SQL commands into programs/scripts. The **object** generates the necessary SQL for retrievals, updates, inserts and deletions of database rows, based on actions - script **function calls** - performed on the Datawindow.

Developers also used the development tool's graphical, point-and-click features to...

...inheritance feature also was used widely in the system. Inheritance was used for security features, common list **windows** and on-line reports, among other functions.

These features - plus standard GUI functions such as drop-down-list-**boxes**, radio buttons, command buttons, button bar, **window** menus and drag-and-drop - give the natural gas marketing system an intuitive and easy-to-use...

**32/3,K/23 (Item 4 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2006 The Gale Group. All rts. reserv.

08010551 SUPPLIER NUMBER: 16904789 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Forte leads 3-tier pack. (Forte Software Inc) (Software Review)(Evaluation)**

Tumminaro, Joe

InformationWeek, n529, p54(6)

May 29, 1995

DOCUMENT TYPE: Evaluation

ISSN: 8750-6874

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 2322 LINE COUNT: 00202

... provides a unified collection of run-time services and control structures to deploy partitions, administer applications, distribute **objects**, perform load-balancing, provide for failover operations, and dynamically tune performance.

The Environment Console helps monitor performance...

...DG-UX, Sequent Dynix, IBM AIX, and SunSoft's SunOS and Solaris servers, as well as Microsoft **windows**, Apple Macintosh, and Motif clients.

Forte's general-purpose **object** wrappers interface with **legacy applications** and other external systems to facilitate coherent transactions across heterogeneous environments. Forte treats wrapper interfaces as distributed **objects**. These **objects** expose their functions as methods.

Legacy support is provided via Netwise's RPC Exec and Micro DecisionWare's Database Gateway, with integration via DDE (Dynamic Data Exchange), Digital's **object** Broker, and gateways from Digital, Sybase, and Oracle. Forte Version 1.1 does not support **OLE** 2.0, ODBC, or DCE, nor does it offer direct support for third-party transaction monitors. Forte...

...the need to program the client-server communications layer. For example, they free developers from programming remote **procedure calls** for client-server communications. Development is faster because applications can be built with less thought given to...

**32/3,k/25 (Item 2 from file: 15)**  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2006 ProQuest Info&Learning. All rts. reserv.

00612933 92-28036  
**New Metrics Needed for New Generation**  
Keyes, Jessica  
Software Magazine v12n6 PP: 42-56 May 1992  
ISSN: 0897-8085 JRNL CODE: SMG  
WORD COUNT: 5242

...TEXT: located in Washington, D.C.

Along with increasing pressure to deliver better quality products in shorter time **frames** and for less money, information systems (IS) organizations must also navigate the uncharted waters of client/server architectures and **object** technology. These new paradigms of development are impacting quality improvement and measurement methodologies, as well as productivity...

...complexity and demand for new systems," said Chikofsky, who is also associate editor-in-chief of IEEE **Software** magazine.

The **old** way of measuring development, "code or die," does not fit in with the new **method** for improving quality **called** Total Quality Management (TQM). Measuring development by the lines of code written focuses on the product, whereas...

**32/3,k/30 (Item 3 from file: 647)**  
DIALOG(R)File 647:CMP Computer Fulltext  
(c) 2006 CMP Media, LLC. All rts. reserv.

01028930 CMP ACCESSION NUMBER: CWK19941024S0032  
**Snap Object Tool Supports Multiprocessor Systems (In Brief)**  
JOHN COX  
COMMUNICATIONSWEEK, 1994, n 528, PG18  
PUBLICATION DATE: 941024  
JOURNAL CODE: CWK LANGUAGE: English  
RECORD TYPE: Fulltext  
SECTION HEADING: Network Applications - Databases & Tools  
WORD COUNT: 360

... work of building parallel applications that run on networks of Unix computers. The software has its own **object** -oriented language and is based on **object** -model architecture. The tool set includes application templates, which can supply 80 percent or more of the...

...different parts of a Snap application, links to multiple relational databases and the ability to work with **legacy software** systems.

A key part of Snap is the Shared Information Base, which lets Snap **objects** work together across different operating system platforms, according to Ferrentino. In addition to the SIB, which is essentially an

**object** request broker, Snap supports an array of other communications facilities, including remote **procedure call**, messaging and interprocess communications. 'It's very easy to do interprocess communications (with Snap),' Ferrentino said.  
Snap...

...Snap runs on and builds applications for several versions of Unix, VAX/VMS, and Microsoft Corp.'s **Windows** and **Windows NT**. Template recently completed a port to OS/2. The product supports TCP/IP, DECnet and the...